

Abstract

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An integrated tunable resonator for radio includes an RF resonator having a micromechanical tunable capacitor with high Q- (quality factor) value. A first conducting layer (4) forms the first capacitor electrode (8), and/or the electrodes (9) to create the electrostatic force on a movable micromechanical structure (2), and the interconnecting wire (10) between the inductor coil (1) and the capacitor electrode. This arrangement with the use of a dielectric insulating layer provides a substantial improvement to the linearity, power consumption, occupation space and reliability of RF resonator circuits.

IN THE CLAIMS:

Please cancel claims 1, 4, 5, 6, 25, 26, and 33-42, add new claims 43-48 stated below, and amend the following claim(s) as rewritten below:

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2. (amended) An integrated tunable RF resonator according to claim 43, **characterized** in that it comprises a substrate insulating layer between the substrate and the first conducting layer.

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3. (amended) An integrated tunable RF resonator according to claim 43, **characterized** in that the first conducting layer forms an interconnecting wire between the inductor coil and the capacitor electrode.

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7. (amended) An integrated tunable RF resonator according to claim 43, **characterized** in that, the substrate insulating layer is arranged as a suspending structure for the capacitor electrode and the inductor coil.

8. (amended) An integrated tunable RF resonator according to claim 43, **characterized** in that, the gap between the capacitor electrodes is an air gap.